

Remarks and Arguments

Claims 1-69 have been presented for examination. Claims 1, 2, 8, 10, 23, 25, 31- 33, 39, 41, 42, 50, 63, 65 and 66 have been amended. Claims 7, 22, 30, 38, 47 and 62 have been canceled.

Claims 1-69 have been rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 6,067,545 (Wolff.) The examiner comments that all of the claimed limitations are disclosed in the Wolff patent.

The present invention is directed to a system for configuring multiple resources in a computer system in order to provide a desired service quality. The system uses multiple configuration elements associated with each resource in the computer system. Each configuration element can configure its associated resource in a manner different from the other configuration elements associated with that resource in order to provide the desired service quality. For example, one configuration element may configure a switch with multiple paths to provide redundancy required by a selected service quality whereas another configuration element associated with that switch may configure the switch with only a single path since that is all that is required by another service quality.

In order to configure an entire system a user controls a management program to select a service configuration policy that provides the desired quality of service. The service configuration policy then sends commands to selected configuration elements to configure some of the system resources to provide the desired service quality. The system configuration is handled by the service configuration policy without manual user intervention.

The claims have been amended to specifically recite this operation. For example, claim1 has been amended to incorporate the limitation of original claim 7, which has consequently been canceled. Amended claim 1 recites, in lines 1-12: "A method for configuring multiple resources in a system, wherein each resource is capable of being configured by multiple elements associated with that resource, each element configuring that resource in a manner different from other elements, comprising receiving a user request for an operation that requires separately configuring multiple resources in the system, ... selecting a service configuration policy that implements a predetermined service quality, [and] using the service configuration policy to

communicate commands to a selected element for each resource.” Claim 1 further recites, in lines 13-21, “ ... for each element receiving at least one of the communicated commands, performing (i) interpreting the received command, (ii) configuring its associated resource as requested by the received command, wherein all resource configurations performed by all the elements in response to receiving the commands implement the user requested operation with the predetermined service quality.”

In contrast, the Wolff reference is directed to a distributed system in which client load rebalancing, resource rebalancing and concurrent input/output through a plurality of nodes can be performed. In the Wolff system, clients are connected to servers via a switched network, such as a packet-switched LAN or a circuit-switched network, such as PSTN network. Client load rebalancing is performed by reconfiguring the connections through the switched network to connect some clients to different servers. This is presumably done by changing the addresses to which packets are sent. However, as described in Wolff at column 4, line 49 to column 5, line 58, client load balancing does not involve a system in which multiple configuration elements are associated with each resource and one of the elements is selected to configure that resource in order to provide an overall quality of service as specified by a selected service configuration policy.

Similarly, in order to perform resource rebalancing, a server modifies a configuration database. As with the client load rebalancing, it is clear that a single server is involved with the resource rebalancing as this server places a lock on the configuration database so that no other servers can participate in the rebalancing. See, for example, Wolff, column 8, lines 1-9. Thus, this is not an operation that requires separately configuring multiple resources as recited in amended claim 1. Further, one of the servers is not selected to configure the database in response to a service configuration policy in order to provide a predetermined quality of service as recited in amended claim 1.

Finally, the examiner points to the Wolff embodiment showing concurrent input/output using a plurality of nodes as illustrating multiple elements (servers) configuring a database. However, in this embodiment, one server acts as an administrative server and actually performs the configuration of the database, such as

allocating additional space. The other server performs data transfer operations. See Wolff, column 6, lines 18-35. To the extent that the other server performs configuration operations, such as zeroing out sectors (Wolff, column 6, lines 60-64) it is clear that both servers operate together. Wolff does not disclose the selection of one server based on a service configuration policy to achieve a desired level of service as recited in amended claim 1 since only one administrative server is associated with each database (Wolff, column 6, lines 18-23). Thus, amended claim 1 patentably distinguishes over the cited Wolff reference.

Claims 2-6, 8 and 9 are dependent, either directly or indirectly on amended claim 1 and incorporate the limitations thereof. Therefore, they distinguish over the cited Wolff reference in the same manner as amended claim 1.

Independent claims 25, 32, 41 and 65 contain limitations that parallel those in amended claim 1. Consequently these latter claims also patentably distinguish over the cited Wolff reference in the same manner as amended claim 1.

Claims 26-29 and 31 are dependent, either directly or indirectly on amended claim 25 and incorporate the limitations thereof. Therefore, they distinguish over the cited Wolff reference in the same manner as amended claim 25.

Claims 33-37 and 39-40 are dependent, either directly or indirectly on amended claim 32 and incorporate the limitations thereof. Therefore, they distinguish over the cited Wolff reference in the same manner as amended claim 32.

Claims 42-46 and 48-49 are dependent, either directly or indirectly on amended claim 41 and incorporate the limitations thereof. Therefore, they distinguish over the cited Wolff reference in the same manner as amended claim 41.

Claims 66-69 are dependent, either directly or indirectly on amended claim 65 and incorporate the limitations thereof. Therefore, they distinguish over the cited Wolff reference in the same manner as amended claim 65.

Independent claims 10 and 50 also contain similar limitations as amended claim 1. For example, claim 10 recites, in lines 15-21, "... using, with the configuration service, the code in the configuration element proxy objects to communicate commands to a selected one of the configuration elements for each resource to implement the requested configuration operations with the requested quality of service; and in

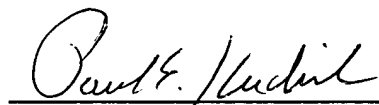
response to receiving the commands from the configuration service, performing, with the configuration elements, a configuration operation on the resource indicated in the received commands." As mentioned with respect to claim 1, the Wolff reference does not disclose selecting a configuration element for each resource based on the quality of service desired. thus, claims 10 and 50 patentably distinguish over the cited Wolff reference in the same manner as claim 1.

Claims 11-21 and 23-24 are dependent, either directly or indirectly on amended claim 10 and incorporate the limitations thereof. Therefore, they distinguish over the cited Wolff reference in the same manner as amended claim 10.

Claims 51-61 and 63-64 are dependent, either directly or indirectly on amended claim 50 and incorporate the limitations thereof. Therefore, they distinguish over the cited Wolff reference in the same manner as amended claim 50.

In light of the forgoing amendments and remarks, this application is now believed in condition for allowance and a notice of allowance is earnestly solicited. If the examiner has any further questions regarding this amendment, he is invited to call applicants' attorney at the number listed below. The examiner is hereby authorized to charge any fees or direct any payment under 37 C.F.R. 1.17, 1.16 to Deposit Account number 02-3038.

Respectfully submitted



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